

Issued Date:Set. 03, 2009 Model No.: V370B1-P03 **Tentative**

TFT LCD Approval Specification MODEL NO.: V370B1-P03

Customer:	
Approved by:	
Note:	

Approved By	TV Product Marketing & Management Div				
	Chao-Chun Chung				

Reviewed By	QA Dept.	Product Development Div.
rtoviewed by	Hsin-Nan Chen	WT Lin

Prepared By	LCD TV Marketing and	Product Management Div.
	Josh Chi	Chloe Chen



Tentative

- CONTENTS -

REVISION HISTORY	 3
1. GENERAL DESCRIPTION 1.1 OVERVIEW 1.2 CHARACTERISTICS 1.3 MECHANICAL SPECIFICATIONS	 4
2. ABSOLUTE MAXIMUM RATINGS 2.1 ABSOLUTE RATINGS OF ENVIRONMENT (BASED ON 0) 2.2 ABSOLUTE RATINGS OF ENVIRONMENT (OPEN CELL) 2.3 ELECTRICAL ABSOLUTE RATINGS (OPEN CELL)	5
3. ELECTRICAL CHARACTERISTICS 3.1 TFT LCD OPEN CELL	7
4. BLOCK DIAGRAM 4.1 TFT LCD OPEN CELL	8
5. INPUT TERMINAL PIN ASSIGNMENT 5.1 TFT LCD MODULE 5.2 BLOCK DIAGRAM OF INTERFACE 5.3 LVDS INTERFACE 5.4 COLOR DATA INPUT ASSIGNMENT 5.5 PATTERN FOR Vcom ADJUSTMENT	9
6. INTERFACE TIMING	 11
6.1 INPUT SIGNAL TIMING SPECIFICATIONS	
7. OPTICAL CHARACTERISTICS 7.1 TEST CONDITIONS 7.2 OPTICAL SPECIFICATIONS	 16
8. PRECAUTIONS 8.1 ASSEMBLY AND HANDLING PRECAUTIONS 8.2 SAFETY PRECAUTIONS	 20
9. PACKING 9.1 PACKING SPECIFICATIONS 9.2 PACKING METHOD	 21
10. REGULATORY STANDARD 10.1 SAFETY	 23
11. DEFINITION OF LABELS 11.1 OPEN CELL LABEL 11.2 CARTON LABEL	 24
12. MECHANICAL DRAWING	 26





Tentative

REVISION HISTORY

Version Date Page (New) Section Description	
Version Date (New) Section (New) Description 0.0 Set. 03, 09 All All Tentative Specification was first issued.	



Tentative

1. GENERAL DESCRIPTION

1.1 OVERVIEW

V370B1- P03 is a 37" TFT LCD cell with driver ICs and a 1-ch LVDS interface. The product supports 1366 x 768 WXGA mode and can display true 16.7M colors. The backlight unit is not built in.

1.2 CHARACTERISTICS

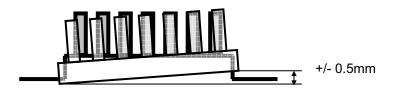
CHARACTERISTICS ITEMS	SPECIFICATIONS
Screen Diagonal [in]	37
Pixels [lines]	1366×768
Active Area [mm]	819.6×460.8
Sub -Pixel Pitch [mm]	0.2(H)×0.6(V)
Pixel Arrangement	RGB vertical stripe
Weight [g]	TYP. 1692
Physical Size [mm]	841.4(W) x 480.4(H) x 1.75(D) Typ.
Display Mode	Transmissive mode / Normally black
Contrast Ratio	3000:1 Typ. (Typical value measured at CMO's module)
Glass thickness (Array/CF) [mm]	0.7 / 0.7
Viewing Angle (CR>20)	+88/-88(H),+88/-88(V) Typ. (Typical value measured at CMO's module)
Color Chromaticity	R=(0.645, 0.335) G=(0.277, 0.595) B=(0.144,0.067) W=(0.285, 0.293) *Please refer to "color chromaticity" on p.16
Cell Transparency [%]	6.0%Typ. (Typical value measured at CMO's module)
Polarizer (CF side)	Anti-glare coating, 834.2(W) x 475.8(H). Hardness: 3 H
Polarizer (TFT side)	834.2(W) x 475.8(H)

1.3 MECHANICAL SPECIFICATIONS

Item	Min.	Тур.	Max.	Unit	Note
Weight		1692		g	
I/F connector mounting position	The mounting in the screen center		connector makes as the horizontal.		(2)

Note (1) Please refer to the attached drawings for more information of front and back outline dimensions.

(2) Connector mounting position





Issued Date:Set. 03, 2009 Model No.: V370B1-P03

Tentative

2. ABSOLUTE MAXIMUM RATINGS

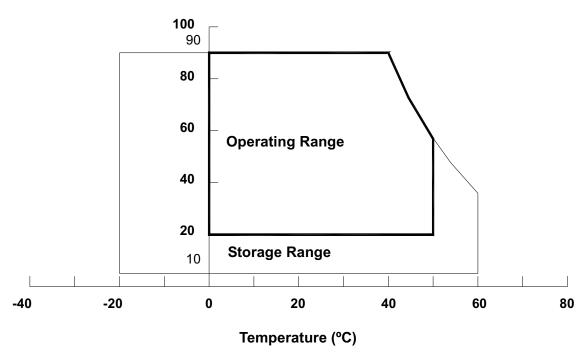
2.1 ABSOLUTE RATINGS OF ENVIRONMENT (BASED ON CMO MODULE V260B1-L11)

Item	Symbol	Va	lue	Unit	Note	
item	Symbol	Min.	Max.	Offic	Note	
Storage Temperature	T _{ST}	-20	+60	°C	(1), (3)	
Operating Ambient Temperature	T _{OP}	0	50	°C	(1), (2), (3)	
Altitude Operating	A _{OP}	0	5000	М	(3)	
Altitude Storage	A _{ST}	0	12000	М	(3)	

Note (1) Temperature and relative humidity range is shown in the figure below.

- (a) 90 %RH Max. (Ta \leq 40 °C).
- (b) Wet-bulb temperature should be 39 °C Max. (Ta > 40 °C).
- (c) No condensation..

Relative Humidity (%RH)



- Note (2) The maximum operating temperature is based on the test condition that the surface temperature of display area is less than or equal to 65 °C with LCD module alone in a temperature controlled chamber. Thermal management should be considered in your product design to prevent the surface temperature of display area from being over 65 °C. The range of operating temperature may degrade in case of improper thermal management in your product design.
- Note (3) The rating of environment is base on LCD module. Leave LCD cell alone, this environment condition can't be guaranteed. Except LCD cell, the customer has to consider the ability of other parts of LCD module and LCD module process.



Tentative

2.2 ABSOLUTE RATINGS OF ENVIRONMENT (OPEN CELL)

Storage Condition : With shipping package.

Storage temperature range : 25±5 $\,^{\circ}$ C Storage humidity range : 50±10 $^{\circ}$ RH

Shelf life: a month

2.3 ELECTRICAL ABSOLUTE RATINGS

2.3.1 TFT LCD MODULE

Itom	Svmbol	Value		Unit	Note
Item	Symbol	Min.	Max.	Ullit	Note
Power Supply Voltage	Vcc	-0.3	13.5	V	(1)
Input Signal Voltage	Vin	-0.3	3.6	V	(1)

Note (1) Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.



Tentative

3. ELECTRICAL CHARACTERISTICS

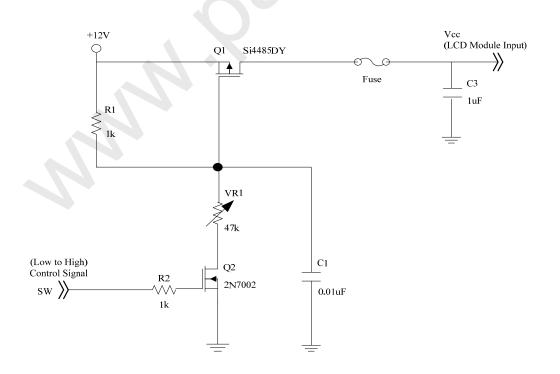
3.1 TFT LCD MODULE

 $(Ta = 25 \pm 2 \, ^{\circ}C)$

Parameter			Symbol			Unit	Note	
			Cymbol	Min.	Тур.	Max.	. Orm	Note
Power Supply Voltage		V _{CC}	10.8	12	13.2	V	(1)	
Rush Curre	ent		I_{RUSH}	_	_	3	Α	(2)
White Pattern		White Pattern	_	_	0.49	_	Α	
Power Sup	ply Current	Horizontal Stripe	_	_	0.61	0.74	Α	(3)
ָן נו		Black Pattern	_	_	0.37	F	А	
	Differential Input High Threshold Voltage Differential Input Low Threshold Voltage Common Input Voltage Differential input voltage		V _{LVTH}	+100	_		mV	
			V_{LVTL}	_		-100	mV	
LVDS interface			V_{CM}	1.0	1.2	1.4	V	(4)
			V _{ID}	200		600	mV	
	Terminating Resistor		R_{T}		100	_	ohm	
CMOS	Input High Threshold Voltage		V _{IH}	2.7	_	3.3	V	
interface	Input Low Threshold Voltage		V _{IL}	0	_	0.7	V	

Note (1) The module should be always operated within the above ranges.

Note (2) Measurement condition:

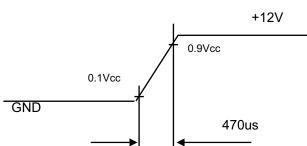




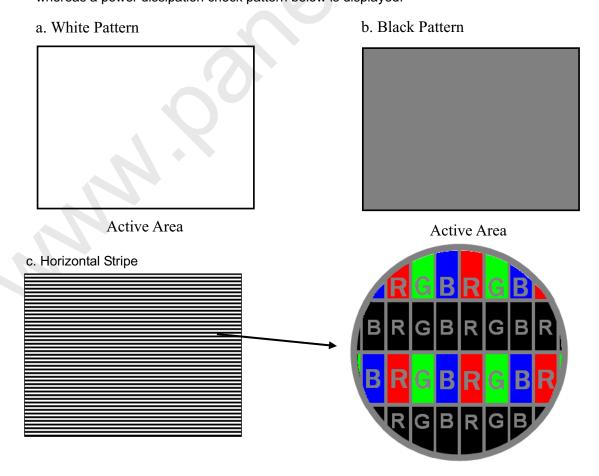
Issued Date:Set. 03, 2009
Model No.: V370B1-P03

Tentative

Vcc rising time is 470us



Note (3) The specified power supply current is under the conditions at Vcc = 12 V, Ta = 25 \pm 2 °C, f_v = 60 Hz, whereas a power dissipation check pattern below is displayed.



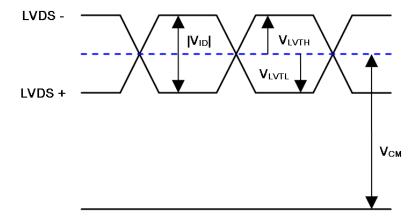




Issued Date:Set. 03, 2009
Model No.: V370B1-P03

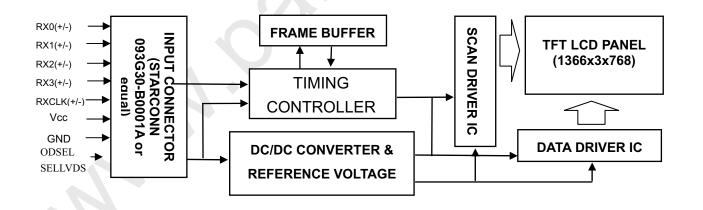
Tentative

Note (4) The LVDS input characteristics are as follows:



4. BLOCK DIAGRAM

4.1 TFT LCD OPEN CELL







Tentative

5. INPUT TERMINAL PIN ASSIGNMENT

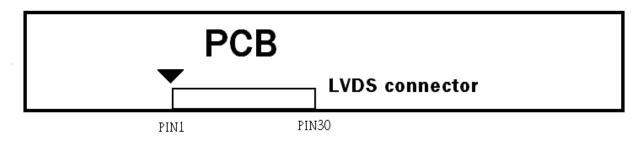
5.1 TFT LCD MODULE

Pin assignment

CNF1 Connector Pin Assignment

Pin No.	Symbol	Description	Note
1	VCC	Power supply: +12V	
2	VCC	Power supply: +12V	
3	VCC	Power supply: +12V	
4	VCC	Power supply: +12V	
5	GND	Ground	
6	GND	Ground	
7	GND	Ground	
8	GND	Ground	
9	SELLVDS	Select LVDS data format	(2),(5)
10	ODSEL	Overdrive Lookup Table Selection	(3),(5)
11	GND	Ground	1
12	RX0-	Negative transmission data of pixel 0	
13	RX0+	Positive transmission data of pixel 0	
14	GND	Ground	
15	RX1-	Negative transmission data of pixel 1	
16	RX1+	Positive transmission data of pixel 1	
17	GND	Ground	
18	RX2-	Negative transmission data of pixel 2	
19	RX2+	Positive transmission data of pixel 2	
20	GND	Ground	
21	RXCLK-	Negative of clock	
22	RXCLK+	Positive of clock	
23	GND	Ground	
24	RX3-	Negative transmission data of pixel 3	
25	RX3+	Positive transmission data of pixel 3	
26	GND	Ground	
27	NC	No connection	(4)
28	NC	No connection	(4)
29	GND	Ground	
30	GND	Ground	

Note (1) Connector type: STARCONN 093G30-B0001A or Faxconn GS23302-1311S-7F or compatible LVDS connector pin orderdefined as follows



Note (2) Low = Open or connect to GND: VESA Format, High = Connect to +3.3V: JEIDA Format. Please refer to 5.5 LVDS INTERFACE

10



Issued Date:Set. 03, 2009 Model No.: V370B1-P03 Tentative

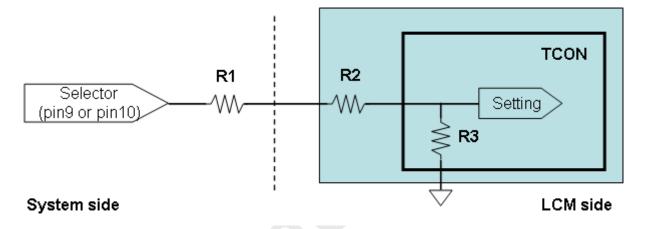
Note (3) Overdrive lookup table selection. The Overdrive lookup table should be selected in accordance to the frame rate to optimize image quality.

Low = Open or connect to GND, High = Connect to +3.3V

ODSEL	Note				
L or Open	Lookup table was optimized for 60 Hz frame rate.				
Н	Lookup table was optimized for 50 Hz frame rate.				

Note (4) Reserved for internal use. Left it open.

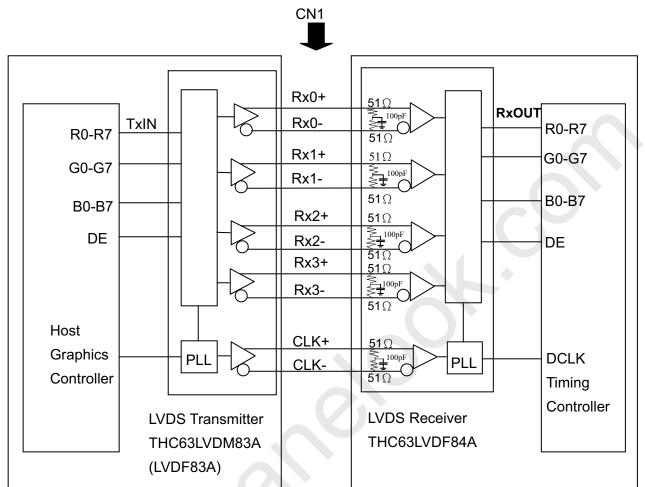
Note (5) LVDS signal pin connected to the LCM side has the following diagram. R1 in the system side should be less than 1K Ohm. (R1 < 1K Ohm)





Tentative

5.2 BLOCK DIAGRAM OF INTERFACE



R0~R7 : Pixel R Data ,
G0~G7 : Pixel G Data ,
B0~B7 : Pixel B Data ,

DE : Data enable signal

Note (1) The system must have the transmitter to drive the module.

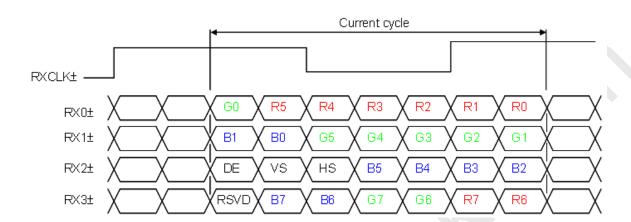
Note (2) LVDS cable impedance shall be 50 ohms per signal line or about 100 ohms per twist-pair line when it is used differentially.



Tentative

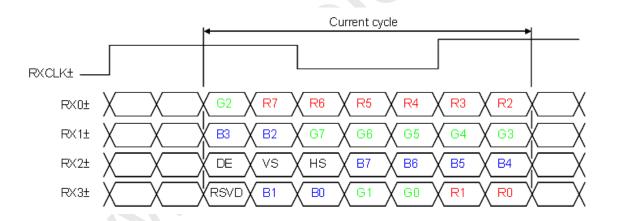
5.3 LVDS INTERFACE

SELLVDS = L or Open (VESA)



www.panelook.com

SELLVDS = H (JEIDA)



R0~R7: Pixel R Data (7; MSB, 0; LSB)

G0~G7: Pixel G Data (7; MSB, 0; LSB)

B0~B7: Pixel B Data (7; MSB, 0; LSB)

DE: Data enable signal

Notes(1) RSVD(reserved)pins on the transmitter shall be "H" or ("L" or OPEN)





Tentative

5.4 COLOR DATA INPUT ASSIGNMENT

The brightness of each primary color (red, green and blue) is based on the 8-bit gray scale data input for the color. The higher the binary input, the brighter the color. The table below provides the assignment of color versus data input.

		Data Signal																							
Color			Red					Green					Blue												
	T	R7	R6	R5	R4	R3	R2	R1	R0	G7	G6	G5	G4	G3	G2	G1	G0	В7	В6	B5	B4	В3	В2	В1	В
	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Basic	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Colors	Cyan	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Red(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(1)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	Red(2)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scale	:	:	:	:	:	:	:	:	·)		:	:	:	:	:	:	:	:	:	:	:	:
Of	:	:	:	:	:	:	:	: (:	:	:		:	:	:	:	:	:	:	:	:	:	:	:	:
Red	Red(253)	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neu	Red(254)	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(255)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Gray	Green(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Scale	:	3	:	÷	1	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Of	: 8		:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Green	Green(253)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0
Green	Green(254)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	Green(255)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	Blue(0) / Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cross	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Gray	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Scale Of	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Of	Blue(253)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1
Blue	Blue(254)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0
	Blue(255)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

Note (1) 0: Low Level Voltage, 1: High Level Voltage

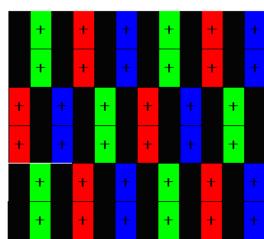




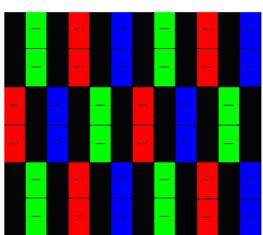
Issued Date:Set. 03, 2009 Model No.: V370B1-P03 **Tentative**

5.5 PATTERN FOR Vcom ADJUSTMENT 2line-inversion pattern (2n)

Frame N



Frame N+1



Gray level = 128



Tentative

6. INTERFACE TIMING

6.1 INPUT SIGNAL TIMING SPECIFICATIONS

The input signal timing specifications are shown as the following table and timing diagram.

Signal	gnal Item S		Min.	Тур.	Max.	Unit	Note
	Frequency	F _{clkin} (=1/TC)	60	76	82	MHz	
LVDS Receiver Clock	Input cycle to cycle jitter	Trcl	-	-	200	ps	(3)
	Spread spectrum modulation range	Fclkin_mod	F _{clkin} -2%	_	F _{clkin} +2%	MHz	(4)
	Spread spectrum modulation frequency	F _{SSM}			200	KHz	(4)
LVDC Desciver Deta	Setup Time	Tlvsu	600	-	-	ps	(5)
LVDS Receiver Data	Hold Time	Tlvhd	600	-	-	ps	(5)
	Frame Rate	Fr5	47	50	53	Hz	(6)
Ventical Active Discription	riame Kale	Fr6	57	60	63	Hz	(0)
Vertical Active Display Term	Total	Tv	778	806	888	Th	Tv=Tvd+Tvb
161111	Display	Tvd	768	768	768	Th	-
	Blank	Tvb	10	38	120	Th	-
Harizantal Astivo	Total	Th	1442	1560	1936	Тс	Th=Thd+Thb
Horizontal Active Display Term	Display	Thd	1366	1366	1366	Tc	-
Display lellii	Blank	Thb	76	194	570	Tc	-

Note (1) Please make sure the range of pixel clock has follow the below equation:

$$\text{Fclkin(max)} \, \geq \, \text{Fr}_6 \, \times \, \text{Tv} \, \times \, \text{Th}$$

$$\mathsf{Fr}_{\mathsf{5}} imes \mathsf{Tv} imes \mathsf{Th} \, \geqq \, \mathsf{Fclkin(min)}$$

Note (2) Since this module is operated in DE only mode, Hsync and Vsync input signals should be set to low logic level. Otherwise, this module would operate abnormally.

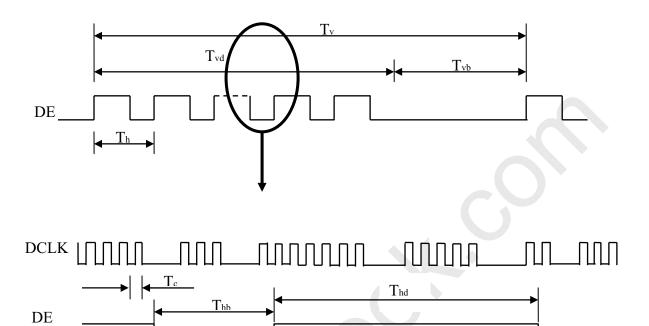


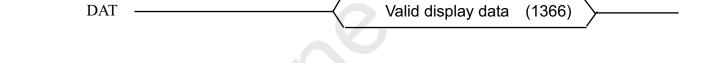


Issued Date:Set. 03, 2009
Model No.: V370B1-P03

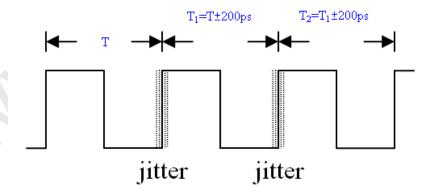
Tentative

INPUT SIGNAL TIMING DIAGRAM





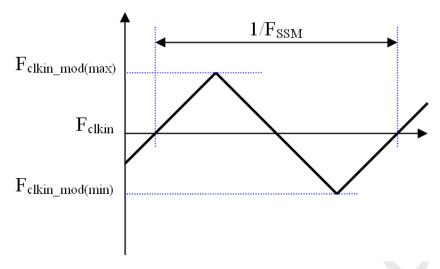
Note (3) The input clock cycle-to-cycle jitter is defined as below figures. Trcl = I $T_1 - TI$





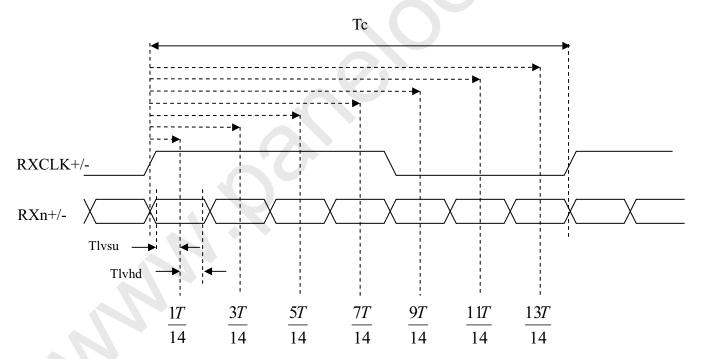
Tentative

Note (4) The SSCG (Spread spectrum clock generator) is defined as below figures.



Note (5) The LVDS timing diagram and setup/hold time is defined and showing as the following figures.

LVDS RECEIVER INTERFACE TIMING DIAGRAM



Note (6): (ODSEL) = H/L or open for 50/60Hz frame rate. Please refer to 5.1 for detail information



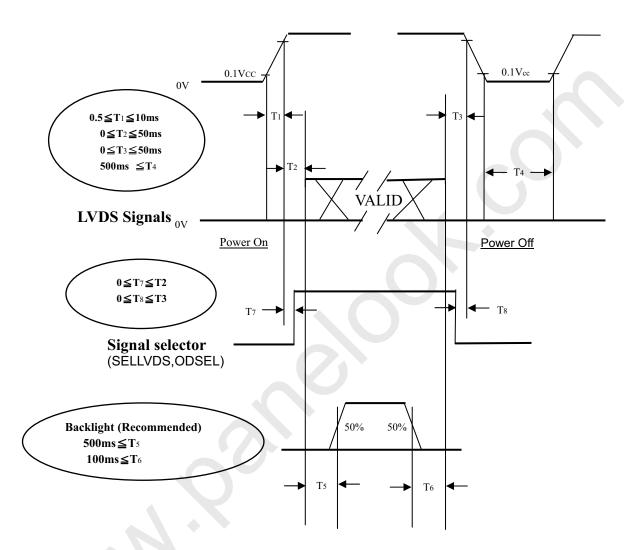
Issued Date:Set. 03, 2009 Model No.: V370B1-P03

Tentative

6.2 POWER ON/OFF SEQUENCE

 $(Ta = 25 \pm 2 \, ^{\circ}C)$

To prevent a latch-up or DC operation of LCD module, the power on/off sequence should be as the diagram



Power ON/OFF Sequence

- Note (1) The supply voltage of the external system for the module input should follow the definition of Vcc.
- Note (2) Apply the lamp voltage within the LCD operation range. When the backlight turns on before the LCD operation or the LCD turns off before the backlight turns off, the display may momentarily become abnormal screen.
- Note (3) In case of Vcc is in off level, please keep the level of input signals on the low or high impedance. If T2<0,that maybe cause electrical overstress failure.
- Note (4) T4 should be measured after the module has been fully discharged between power off and on period.
- Note (5) Interface signal shall not be kept at high impedance when the power is on.





Tentative

7. OPTICAL CHARACTERISTICS

7.1 TEST CONDITIONS

Item	Symbol	Value	Unit		
Ambient Temperature	Ta	25±2	°C		
Ambient Humidity	На	50±10	%RH		
Supply Voltage	V _{cc}	12.0	V		
Input Signal	According to typical va	alue in "3. ELECTRICAL (CHARACTERISTICS"		
Lamp Current (High side)	L	7.5 mA \pm 0.5	mA		
Oscillating Frequency (Inverter)	F _W	58±3	KHz		
Frame rate		60	Hz		

7.2 OPTICAL SPECIFICATIONS

The relative measurement methods of optical characteristics are shown as below. The following items should be measured under the test conditions described in 7.1 and stable environment shown in Note (5).

	Item		Symbol	Condition	Min.	Тур.	Max.	Unit	Note	
		Dad	Rcx			0.645		1		
		Red	Rcy			0.335		-		
		Green	Gcx		Тур.	0.277	Typ. +0.03	-		
Color		Green	Gcy	$\theta_x = 0^\circ, \theta_Y = 0^\circ$		0.595		-	(1) (5)	
Chromatici	ty	Blue	Всх	Viewing angle at normal direction With CMO module	-0.03	0.144		-	(1),(5)	
		blue	Всу			0.067		ı		
		White	Wcx			0.285		ı		
			Wcy			0.293		ı		
Center Tra	Center Transmittance		T%	θ _x =0°, θ _Y =0°	ı	6.0	-	%	(1),(7)	
Contras	Contrast Ratio		CR	with CMO module	2000	3000	-		(1),(3)	
Response Time		me	Gray to gray average	θ_x =0°, θ_Y =0° with CMO Module@60Hz	ı	6.5	12	ms	(4)	
White Variation		δW	θ_x =0°, θ_Y =0° with CMO module	ı	ı	1.3	ı	(1),(6)		
	Hor	rizontal	θ_x +		80	88	-			
Viewing	1101	HZOHIAI	θ_{x} -	CR≥20	80	88	-	Deg.	(1),(2)	
Angle	Ve	artical	θ_{Y} +	With CMO module	80	88	-	Deg.	(1),(2)	
	Vertical		θ_{Y} -		80	88	-			

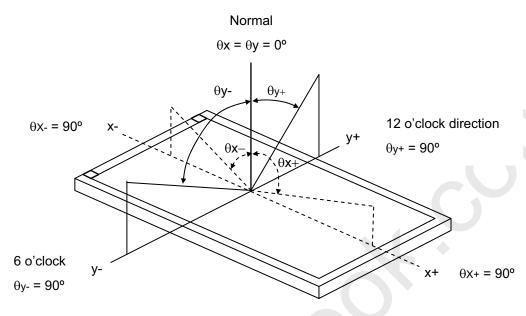


Issued Date:Set. 03, 2009 Model No.: V370B1-P03 Tentative

Note (1) Light source is CMO's V370B1-L01 BLU and driving voltages are based on suitable gamma voltages.

Note (2) Definition of Viewing Angle (θx , θy):

Viewing angles are measured by Autronic Conoscope Cono-80



Note (3) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.

Contrast Ratio (CR) = L255 / L0

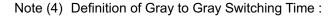
L255: Luminance of gray level 255

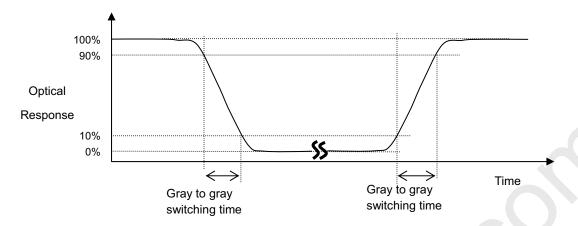
L 0: Luminance of gray level 0

CR = CR (5), where CR (X) is corresponding to the Contrast Ratio of the point X at the figure in Note (6).



Issued Date:Set. 03, 2009 Model No.: V370B1-P03 Tentative

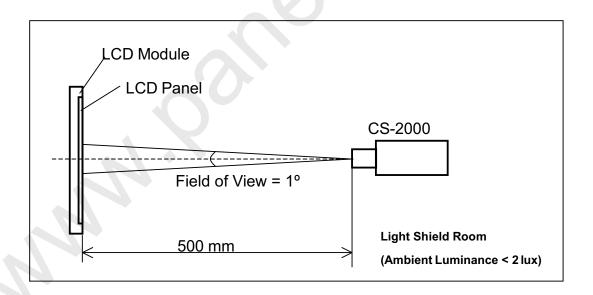




The driving signal means the signal of gray level 0, 124, 168, 204, 232, 255. Gray to gray average time means the average switching time of gray level 0, 124, 168, 204, 232, 255 to each other .

Note (5) Measurement Setup:

The LCD module should be stabilized at given temperature for 1 hour to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 1 hour in a windless room.



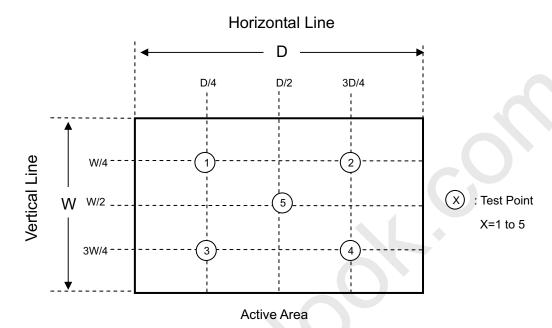


Issued Date:Set. 03, 2009 Model No.: V370B1-P03 Tentative

Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 255 at 5 points

 $\delta W = Maximum [L (1), L (2), L (3), L (4), L (5)] / Minimum [L (1), L (2), L (3), L (4), L (5)]$



Note (7) Definition of Transmittance (T%):

Module is without signal input.

Tentative

8. PRECAUTIONS

8.1 ASSEMBLY AND HANDLING PRECAUTIONS

- (1) Do not apply rough force such as bending or twisting to the product during assembly.
- (2) To assemble backlight or install module into user's system can be only in clean working areas. The dust and oil may cause electrical short or worsen the polarizer.
- (3) It's not permitted to have pressure or impulse on the module because the LCD panel will be damaged.
- (4) Always follow the correct power sequence when the product is connecting and operating. This can prevent damage to the CMOS LSI chips during latch-up.
- (5) Do not pull the I/F connector in or out while the module is operating.
- (6) Use a soft dry cloth without chemicals for cleaning, because the surface of polarizer is very soft and easily scratched.
- (7) It is dangerous that moisture come into or contacted the product, because moisture may damage the product when it is operating.
- (8) High temperature or humidity may reduce the performance of module. Please store this product within the specified storage conditions.
- (9) When ambient temperature is lower than 10°C may reduce the display quality. For example, the response time will become slowly.

8.2 SAFETY PRECAUTIONS

- (1) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, skin or clothes, it has to be washed away thoroughly with soap.
- (2) After the product's end of life, it is not harmful in case of normal operation and storage.



Tentative

9. PACKAGING

9.1 PACKING SPECIFICATIONS

(1) 15PCS LCD TV Panels / 1 Box

(2) Box dimensions: 982 (L) X 642 (W) X 268 (H)

(3) Weight: approximately 36 Kg

9.2 PACKING METHOD

Figures 9-1 and 9-2 are the packing method

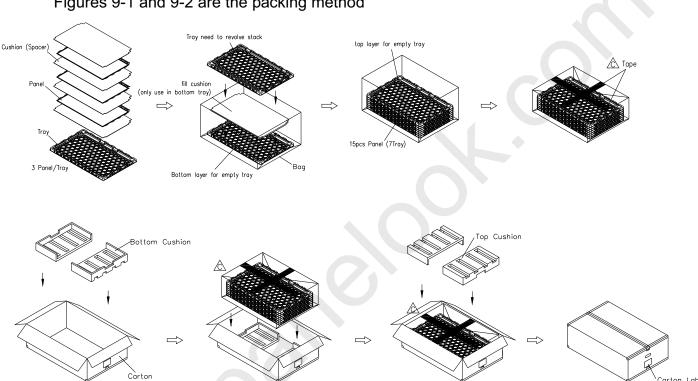
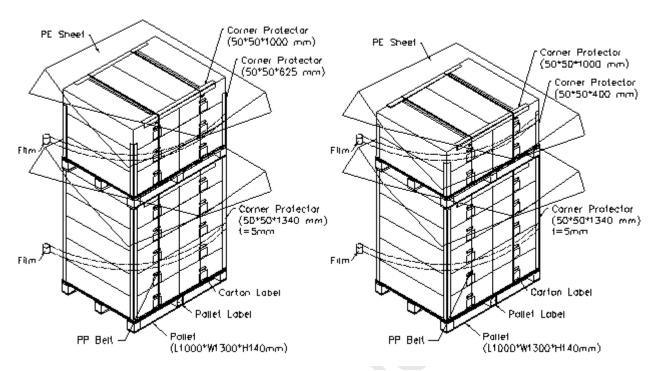


Figure.10-1 packing method



Tentative

Sea / Land Transportation (40ft HQ Container) Sea / Land Transportation (40ft Container)



Air Transportation

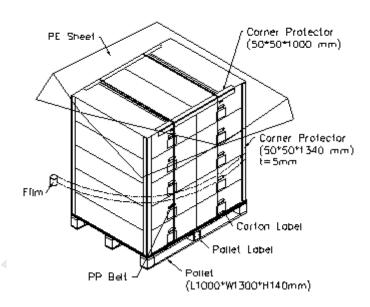


Figure.10-2 packing method





Tentative

10. REGULATORY STANDARDS

10.1 SAFETY

Regulatory	Item	Standard
	UL	UL 60950-1: 2003
Information Technology equipment	cUL	CAN/CSA C22.2 No.60950-1-03
	СВ	IEC 60950-1:2001
	UL	UL 60065: 2003
Audio/Video Apparatus	cUL	CAN/CSA C22.2 No.60065-03
	CB	IEC 60065:2001



Issued Date:Set. 03, 2009 Model No.: V370B1-P03 Tentative

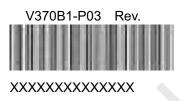
11. DEFINITION OF LABELS

11.1 OPEN CELL LABEL

The barcode nameplate is pasted on each open cell as illustration for CMO internal control.



The barcode nameplate is pasted on Protector Film of each open cell as illustration for CMO internal control.



11.2 CARTON LABEL

The barcode nameplate is pasted on each box as illustration, and its definitions are as following explanation



(a) Model Name: V370B1- P03

(b) Carton ID: CMO internal control

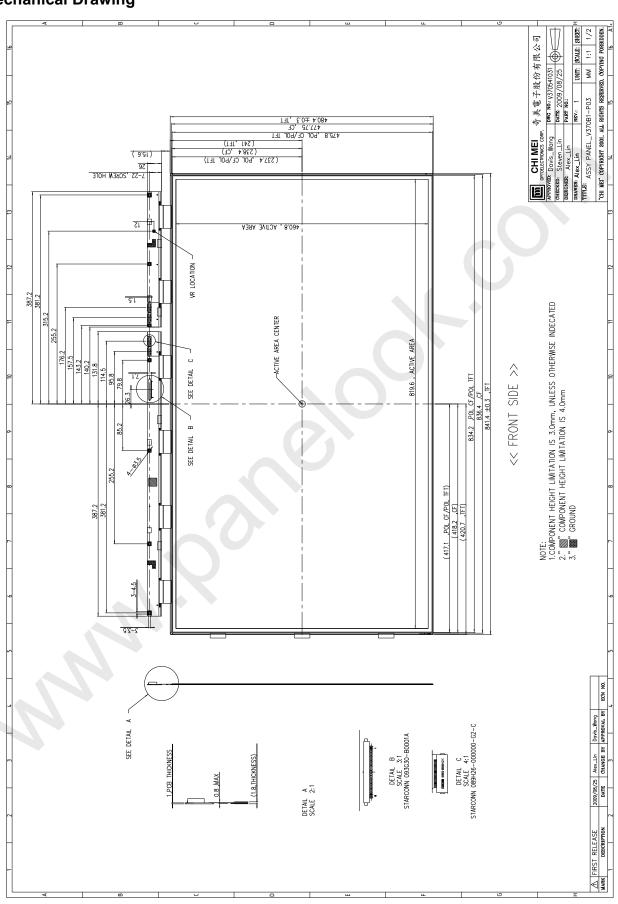
(c) Quantities: 15



Issued Date:Set. 03, 2009 Model No.: V370B1-P03

Tentative

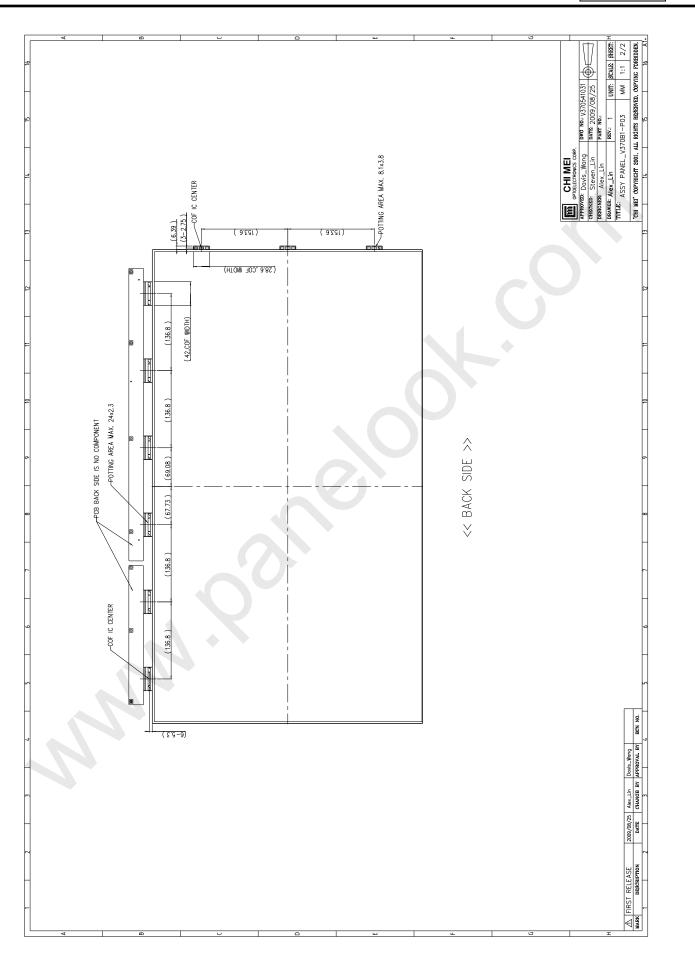
12. Mechanical Drawing





Issued Date:Set. 03, 2009 Model No.: V370B1-P03

Tentative



30